

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Cancelled).
2. (Cancelled).
3. (Cancelled).
4. (Cancelled).
5. (Cancelled).
6. (Cancelled).
7. (Cancelled).
8. (Cancelled).
9. (Cancelled).
10. (Cancelled).

11. (Cancelled).

12. (Cancelled).

13. (Cancelled).

14. (Cancelled).

15. (Cancelled).

16. (Cancelled).

17. (Cancelled).

18. (Cancelled).

19. (Currently Amended) A process for manufacturing a hot rolled and tempered plastic mold tool from a ~~bore-free~~ tool steel alloy, the process ~~comprising~~ consisting essentially of the steps of: shaping the tool steel alloy by hot rolling into a hot rolled plate using a hot rolling mill; hot leveling the hot rolled plate while the hot rolled plate is still on the hot rolling mill; cooling the hot leveled plate by free air cooling to a temperature below about 600 ° F.; tempering the air cooled plate to a hardness in the range of from about 277 to about 311 BHN and forming the

tempered air cooled plate into plastic mold tooling.

20. (Previously Presented) The process of claim 19, comprising preparing a material charge; melting the material charge in an electric furnace; ladle refining the melted material to remove impurities and homogenize the melted material; removing gases from the melted material by vacuum degassing, argon shield pouring the melted material into a mold and shaping the cast tool steel alloy in a rolling mill using an argon shield; hot leveling the tool steel alloy after rolling; cooling the tool steel alloy by free air cooling to a temperature below about 600 °F.; and tempering the tool steel alloy to a hardness in the range of from about 277 to about 311 BHN.

21. (Currently Amended) The process of claim 19, wherein the tool steel includes about 0.6 to about 0.9 percent by weight manganese, a maximum of 0.02 percent by weight phosphorous, from about 0.25 percent to about 0.45 percent by weight silicon, a maximum of 0.2 percent by weight nickel, a maximum of 0.15 percent by weight copper, and from about 0.015 percent to about 0.03 percent by weight aluminum, and the balance comprising iron.

22. (Currently Amended) The process of claim 19, wherein the air cooled plate has a hardness higher than ~~that desired for~~ the hardness of the mold tooling and the tempering lowers the hardness to the ~~desired~~ hardness for the mold tooling.

23. (Currently Amended) The process of claim 19, ~~wherein~~ further comprising melting and casting the tool steel ~~is melted and cast~~ into a mold, ~~cooled~~ cooling and ~~reheated~~ reheating the cast tool steel prior to the hot rolling step.

24. (Currently Amended) The process of claim 19, ~~wherein~~ further comprising forming the tool steel ~~is formed~~ into a mold base.

25. (Previously Presented) The process of claim 19, wherein the free air cooling comprises cooling the hot leveled plate on a rigid cooling table so as to obtain a flat and wrinkle free plate which is not moved or lifted until the hot leveled plate is cooled below 600 °F, the hot leveling and free air cooling thereby producing an air cooled plate free of residual bending stresses associated with low temperature leveling and flattening operations.

26. (Cancelled).

27. (Cancelled).